

RECEIVED
CENTRAL FAX CENTER

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

DEC 30 2003

OFFICIAL

Appl.No.: 09/542,888
Appellant: Hoyle
Filed: April 4, 2000
TC/A.U. 2124
Examiner: Ngo

Confirmation No.: 5971

Docket No.: TI-28591
Cust.No.: 23494

APPELLANT'S BRIEF (in triplicate)

#PJD
J-Cattin
1-6-04

Commissioner for Patents
P.O.Box 1450
Alexandria VA 22313-1450

Sir:

The attached sheets contain the Rule 192(c) items of appellants' brief.
The Commissioner is hereby authorized to charge the fee for filing a brief in
support of the appeal plus any other necessary fees to the deposit account of
Texas Instruments Incorporated, account No. 20-0668. A fee transmittal sheet is
enclosed.

Respectfully submitted,


Carlton H. Hoel
Reg. No. 29,934
Texas Instruments Incorporated
PO Box 655474, M/S 3999
Dallas, Texas 75265
972.917.4365

Page 1 of 5

Rule 192(c)(1) Real party of interest

Texas Instruments Incorporated owns the application.

Rule 192(c)(2) Related appeals and interferences

There are no related dispositive appeals or interferences.

Rule 192(c)(3) Status of claims

Claims 1-6 are pending in the application with all claims finally rejected.

This appeal involves the finally rejected claims.

Rule 192(c)(4) Status of amendments

There is no amendment after final rejection.

Rule 192(c)(5) Summary of the invention

The invention provides a method of fast Fourier transform (FFT) implementation using a sequential memory access; this may take advantage of cache memory. Figures 1 and 3 illustrate the sequence of butterfly computations for a preferred embodiment and the prior art, respectively; and application pages 4-5 describe the operations of these figures.

Rule 192(c)(6) Issues

The issues presented on appeal are:

- (1) whether claims 1-4 and 6 are anticipated by the Brockmeyer reference.
- (2) whether claim 5 is patentable over the Brockmeyer reference.

Rule 192(c)(7) Grouping of the claims

The claims are treated as a single group.

Rule 192(c)(8) Argument

- (1) Claims 1-4 and 6 were rejected as anticipated by Brockmeyer.

Appellant replies that Brockmeyer has a filing date of 07/10/2000 and claims priority from a provisional application with a filing date of 07/9/1999. In contrast, the present application has a filing date of 04/04/2000 and claims priority from provisional application 60/128,340 with a filing date of 04/08/1999. Consequently, Brockmeyer is not a reference.

(2) Claim 5 was rejected as unpatentable over Brockmeyer.

Appellant repeats argument (1) that Brockmeyer is not a reference. Hence, the rejections are overcome.

Rule 192(c)(9) Appendix

Claim 1: A fast Fourier transform method, comprising the steps of:

- (a) storing data in sequence in memory;
- (b) partitioning a fast Fourier transform into three or more stages;
- (c) within each of said stages ordering the butterfly computations to correspond to said sequence.

Claim 2: The method of claim 1, further comprising the steps of:

- (a) providing a redundant twiddle factor table including a first set of twiddle factors plus a second set of twiddle factors wherein said second set is a subset of said first set.

Claim 3: A fast Fourier transform method, comprising the steps of:

- (a) providing N-point data where N is a positive integer;
- (b) computing radix-R butterflies in a block of N/R overlapping butterflies of said data where R is a positive integer;
- (c) computing radix-R butterflies in a first block of N/R^2 overlapping butterflies of the results of step (a); and
- (d) after step (c) computing radix-R butterflies in a second block of N/R^2 overlapping butterflies of the results of step (a).

Claim 4: The method of claim 3, wherein:

- (a) R equals 2.

Claim 5: The method of claim 3, wherein:

- (a) R equals 4.

Claim 6: The method of claim 3, further comprising:

(a) providing a redundant twiddle factor table including a first set of twiddle factors plus a second set of twiddle factors wherein said second set is a subset of said first set.

To: Technology Center 2100
Facsimile Number: 703-872-9306

From: Carlton H. Hoel
Texas Instruments Incorporated
Facsimile: 972-917-4418
Phone: 972-917-4365

RECEIVED
Total Pages Sent: 6 CENTRAL FAX CENTER

DEC 30 2003

OFFICIAL

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: David J. Hoyle
 Serial No: 09/542,888
 Filed: 4/4/2000
 Art Unit: 2124
 Examiner: C. Ngo
 Docket No.: TI-28591
 Conf. No.: 5971
 Customer No.: 23494

CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that the following papers are being transmitted by facsimile to the U.S. Patent and Trademark Office at 703-872-9306 on the date shown below:

Gracia Sansom

Gracia Sansom

12-30-03

Date

FACSIMILE COVER SHEET

<input checked="" type="checkbox"/> FACSIMILE COVER SHEET (1 SHEET)	<input type="checkbox"/> AMENDMENT _____
<input type="checkbox"/> NEW APPLICATION	<input type="checkbox"/> EOT _____
<input type="checkbox"/> DECLARATION	<input type="checkbox"/> NOTICE OF APPEAL _____
<input type="checkbox"/> ASSIGNMENT	<input checked="" type="checkbox"/> APPEAL <input type="checkbox"/> BRIEF (5 Pages)
<input type="checkbox"/> FORMAL DRAWINGS	<input type="checkbox"/> ISSUE FEE _____
<input type="checkbox"/> INFORMAL DRAWINGS	<input type="checkbox"/> REPLY BRIEF (IN TRIPPLICATE)
<input type="checkbox"/> CONTINUATION APP'N	<input checked="" type="checkbox"/> Fee Transmittal (1 page)
<input type="checkbox"/> DIVISIONAL APP'N	
NAME OF INVENTOR(S):	
David J. Hoyle	
TITLE OF INVENTION:	
Fast Fourier Transform	
FILE NO.:	DEPOSIT ACCT. NO.:
TI-28591	20-0668
FAXED: 12/30/2003	
DUE: 12/31/2003	
ATTY/SECY: CHH/gs	
RECEIPT DATE & SERIAL NO.:	
Serial No.: 09/542,888	
Filing Date: 4/4/2000	
Conf. No.: 5971	

This facsimile is intended only for the use of the address named and contains legally privileged and/or confidential information. If you are not the intended recipient of this telescopy, you are hereby notified that any dissemination, distribution, copying or use of this communication is strictly prohibited. Applicable privileges are not waived by virtue of the document having been transmitted by Facsimile. Any misdirected facsimiles should be returned to the sender by mail at the address indicated on this cover sheet.

Texas Instruments Incorporated
PO Box 655474, M/S 3999
Dallas, TX 75265

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB number.

FEE TRANSMITTAL For FY 2004

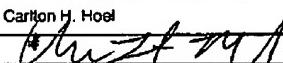
Effective 01/01/2003. Patent fees are subject to annual revision

 Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT****\$330.00****Complete If Known**

Application Number	09/542,888
Filing Date	04/04/2000
First Named Inventor	Doyle
Examiner Name	Ngo
Art Unit	2124

Attorney Docket No. **TI-28591**

METHOD OF PAYMENT (Check all that apply)				FEES CALCULATION (continued)																																																																																																																
<input type="checkbox"/> Check <input type="checkbox"/> Credit Card <input type="checkbox"/> Money Order <input type="checkbox"/> Other <input type="checkbox"/> Credit Card				3. ADDITIONAL FEES <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Large Entity</th> <th style="width: 25%;">Small Entity</th> <th style="width: 50%;"></th> </tr> </thead> <tbody> <tr><td>Fee Code (\$)</td><td>Fee Code (\$)</td><td>Fee Description</td></tr> <tr><td>1051</td><td>130</td><td>Surcharge - late filing fee or oath</td></tr> <tr><td>1052</td><td>50</td><td>Surcharge - late provisional filing fee or cover sheet</td></tr> <tr><td>1053</td><td>130</td><td>Non-English specification</td></tr> <tr><td>1812</td><td>2,320</td><td>For filing a request for ex parte reexamination</td></tr> <tr><td>1804</td><td>920*</td><td>Requesting publication of SIR prior to Examiner action</td></tr> <tr><td>1805</td><td>1,840*</td><td>Requesting publication of SIR after Examiner action</td></tr> <tr><td>1251</td><td>110</td><td>Extension for reply within first month</td></tr> <tr><td>1252</td><td>420</td><td>Extension for reply within second month</td></tr> <tr><td>1253</td><td>950</td><td>Extension for reply within third month</td></tr> <tr><td>1254</td><td>1,480</td><td>Extension for reply within fourth month</td></tr> <tr><td>1401</td><td>330</td><td>Notice of Appeal</td></tr> <tr><td>1402</td><td>330</td><td>Filing a brief in support of an appeal</td></tr> <tr><td>1403</td><td>290</td><td>Request for Oral Hearing</td></tr> <tr><td>1451</td><td>1,510</td><td>Petition to Instate a public use proceeding</td></tr> <tr><td>1452</td><td>110</td><td>Petition to revive - unavoidable</td></tr> <tr><td>1453</td><td>1,330</td><td>Petition to revive - unintentional</td></tr> <tr><td>1501</td><td>1,330</td><td>Utility issue fee (or reissue)</td></tr> <tr><td>1503</td><td>630</td><td>Plant issue fee</td></tr> <tr><td>1460</td><td>130</td><td>Petitions to the Commissioner</td></tr> <tr><td>1807</td><td>50</td><td>Processing fee under 37 CFR 1.17(q)</td></tr> <tr><td>1806</td><td>180</td><td>Submission of Information Disclosure Stmt</td></tr> <tr><td>8021</td><td>40</td><td>Recording each patent assignment per property (times number of properties)</td></tr> <tr><td>1809</td><td>750</td><td>Filing a submission after final rejection (37 CFR 1.129(b))</td></tr> <tr><td>1810</td><td>770</td><td>For each additional invention to be examined (37 CFR 1.129(b))</td></tr> <tr><td>1801</td><td>770</td><td>Request for Continuation Examination (RCE)</td></tr> <tr><td>1802</td><td>900</td><td>Request for expedited examination of a design application</td></tr> <tr><td colspan="4">Other fee (specify) _____</td></tr> <tr> <td colspan="4" style="text-align: right;">*Reduced by Basic Filing Fee Paid</td> <td colspan="2" style="text-align: right;">SUBTOTAL (3)</td> <td style="text-align: right;">(\$330.00)</td> </tr> <tr> <td colspan="4" style="text-align: center;">SUBTOTAL (1) \$0</td> <td colspan="2" style="text-align: center;">SUBTOTAL (2) \$0</td> <td></td> </tr> <tr> <td colspan="4" style="text-align: center;">**or number previously paid, if greater; For Reissues, see above</td> <td colspan="2"></td> <td></td> </tr> </tbody> </table>				Large Entity	Small Entity		Fee Code (\$)	Fee Code (\$)	Fee Description	1051	130	Surcharge - late filing fee or oath	1052	50	Surcharge - late provisional filing fee or cover sheet	1053	130	Non-English specification	1812	2,320	For filing a request for ex parte reexamination	1804	920*	Requesting publication of SIR prior to Examiner action	1805	1,840*	Requesting publication of SIR after Examiner action	1251	110	Extension for reply within first month	1252	420	Extension for reply within second month	1253	950	Extension for reply within third month	1254	1,480	Extension for reply within fourth month	1401	330	Notice of Appeal	1402	330	Filing a brief in support of an appeal	1403	290	Request for Oral Hearing	1451	1,510	Petition to Instate a public use proceeding	1452	110	Petition to revive - unavoidable	1453	1,330	Petition to revive - unintentional	1501	1,330	Utility issue fee (or reissue)	1503	630	Plant issue fee	1460	130	Petitions to the Commissioner	1807	50	Processing fee under 37 CFR 1.17(q)	1806	180	Submission of Information Disclosure Stmt	8021	40	Recording each patent assignment per property (times number of properties)	1809	750	Filing a submission after final rejection (37 CFR 1.129(b))	1810	770	For each additional invention to be examined (37 CFR 1.129(b))	1801	770	Request for Continuation Examination (RCE)	1802	900	Request for expedited examination of a design application	Other fee (specify) _____				*Reduced by Basic Filing Fee Paid				SUBTOTAL (3)		(\$330.00)	SUBTOTAL (1) \$0				SUBTOTAL (2) \$0			**or number previously paid, if greater; For Reissues, see above						
Large Entity	Small Entity																																																																																																																			
Fee Code (\$)	Fee Code (\$)	Fee Description																																																																																																																		
1051	130	Surcharge - late filing fee or oath																																																																																																																		
1052	50	Surcharge - late provisional filing fee or cover sheet																																																																																																																		
1053	130	Non-English specification																																																																																																																		
1812	2,320	For filing a request for ex parte reexamination																																																																																																																		
1804	920*	Requesting publication of SIR prior to Examiner action																																																																																																																		
1805	1,840*	Requesting publication of SIR after Examiner action																																																																																																																		
1251	110	Extension for reply within first month																																																																																																																		
1252	420	Extension for reply within second month																																																																																																																		
1253	950	Extension for reply within third month																																																																																																																		
1254	1,480	Extension for reply within fourth month																																																																																																																		
1401	330	Notice of Appeal																																																																																																																		
1402	330	Filing a brief in support of an appeal																																																																																																																		
1403	290	Request for Oral Hearing																																																																																																																		
1451	1,510	Petition to Instate a public use proceeding																																																																																																																		
1452	110	Petition to revive - unavoidable																																																																																																																		
1453	1,330	Petition to revive - unintentional																																																																																																																		
1501	1,330	Utility issue fee (or reissue)																																																																																																																		
1503	630	Plant issue fee																																																																																																																		
1460	130	Petitions to the Commissioner																																																																																																																		
1807	50	Processing fee under 37 CFR 1.17(q)																																																																																																																		
1806	180	Submission of Information Disclosure Stmt																																																																																																																		
8021	40	Recording each patent assignment per property (times number of properties)																																																																																																																		
1809	750	Filing a submission after final rejection (37 CFR 1.129(b))																																																																																																																		
1810	770	For each additional invention to be examined (37 CFR 1.129(b))																																																																																																																		
1801	770	Request for Continuation Examination (RCE)																																																																																																																		
1802	900	Request for expedited examination of a design application																																																																																																																		
Other fee (specify) _____																																																																																																																				
*Reduced by Basic Filing Fee Paid				SUBTOTAL (3)		(\$330.00)																																																																																																														
SUBTOTAL (1) \$0				SUBTOTAL (2) \$0																																																																																																																
**or number previously paid, if greater; For Reissues, see above																																																																																																																				

SUBMITTED BY		(Complete if applicable)		
Name (Print/Type)	Carlton H. Hoel	Registration No. (Attorney/Agent)	29,934	Telephone (972) 917-4365
Signature			Date	12/30/2003

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THE ADDRESS. SEND TO: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450